

selecting a machine instruction available at that site, which instruction is indicative of the local state of that site, adding the machine instruction to the diagnostic file and moving to an adjacent site where the process is repeated. The resulting sequence of machine instructions is applied to a functional model of the processor and also to a “logical design” of the processor and the output results are compared to determine that a bug has been found in the processor. By operating in this manner, the testing of a processor can be done with a wide range of possible sequences of realistic machine instructions representative of what would be expected in the real world.

Claim 1

The Examiner seeks to construe the cited Ahmed patent as anticipatory of the Applicants’ invention. While Applicants concede that Ahmed appears to relate to a system for generating test instructions for testing processors, they respectfully traverse Examiner’s contention that the Abstract and Fig. 1 of Ahmed are “identical to the claimed invention” of claim 1. Although the Examiner points out a portion of the Ahmed specification as purportedly showing a “global file of global variables”, those terms are not used in the cited material and Applicants see no file that is discussed in the cited material that appears to have the interrelationships with other files that the claimed global file has in Applicants claim 1. Similarly there is no support apparent in the cited material for the Examiner’s contention that it shows “a plurality of local files relating (to) local variables to the global variables in the manner required by Applicants’ claim 1. Finally, Applicants don’t understand the meaning of the Examiner’s reference to “local files in the templates containing a plurality of cells inherently known in the art”. Since claim 1 makes no reference to “templates”, the Examiner’s comment is not understandable since there is no explanation as to how “local files in a template”, which are apparently contended to be shown in Ahmed, are alleged to anticipate any of the elements that are called for in claim 1.

It is respectfully suggested that the Examiner has failed to meet the burden of demonstrating how it is that anything in Ahmed anticipates the claimed combination of claim 1. Reconsideration and allowance of claim 1 is respectfully solicited.

Claims 2, 3, 10, and 11

As to claims 2, 3, 10 and 11, the Examiner contends that the diagnostic files of Ahmed contain “‘inherit files’ and ‘instance files’ to fill in or change parameters in each file”, (citing col

8, lines 55-64). The cited section refers to a "state file 58" which contains "global information required to fill in fields associated with the various diagnostic instructions". Considered in the context of the Ahmed patent, it is clear that what is being discussed in the quoted portion are not "inherit files" and the "instance files" as claimed in claim 2, 3, 10 and 11. The Ahmed patent is actually discussing the creation of the **diagnostic file** 64 of Fig. 7 which is loaded by the generator 62 which uses the **net file** 56 and the **state file** 58 and **niche file** 59 to create the instructions for the **diagnostic file** 64. This does nothing to show anticipation of dependent claims 2, 3, 10, and 11 which include all of the features of claim 1, as well as adding their individual additional features.

The Examiner has failed to make a clear showing that the cited portions of the Ahmed patent have anything which shows or suggests the very clearly claimed inherit and instance files taught in Applicants' specification. Reconsideration and allowance of claims 2, 3, 10 and 11 is respectfully requested.

Claim 4

As to claim 4, the Examiner contends that the claimed "master files" of the claim are shown in the cited Ahmed patent since the patent refers to "diagnostic files" "netlist files" "state files" etc. and that one skilled in the art would keep a "master file to track the design parameters in those files. Again, it is pointed out that claim 4 not only refers to a "master file" but states the relationship of the master file to the "initial version of a corresponding local file". That specific feature as to the master file and the other features and the relationships between the various files that are carried into claim 4 from claim 1 are not either shown or suggested by the relied upon portion of the cited Ahmed patent.

Reconsideration and allowance of claim 4 is respectfully requested.

Claim 5

As to claim 5, the Examiner contends that Ahmed discloses "various templates or platforms being used for the design verification". No specific portion of the specification or drawings was specifically referenced. Applicants do not agree that any "templates" or "platforms" which may appear in the cited Ahmed patent have any relationship to, much less anticipate, the claimed "cleansheet file" called for in dependent claim 5 and meeting the features

that call for the cleansheet file to either “contain the current design rules for the plurality of cells” or to function to allow the “values for the global variables to be derived therefrom”.

The Examiner has not met the burden of demonstrating anticipation of the invention of claim 5. Reconsideration and allowance of that claim is respectfully requested.

Claims 6, 8, 9 and 12

As to claims 6, 8, 9 and 12, the Examiner contends that Ahmed discloses “file update” or “modifying the design file for circuit design verification” which, it is contended, “has been well known for those skilled in the art”. The Examiner contends that Ahmed shows that the “update process is carried out in local files, fields, global files, design rule files as necessarily required by the (Ahmed) verification process”.

Applicants’ invention as claimed in claims 6, 8, 9, and 12 claims a computerized system which has a global file containing global variables that are not specific to any given type of cell, a plurality of local files and a plurality of cells which each correspond to a local file and a cleansheet file. As stated in claim 6, there is a specific relationship between the three specifically claimed types of files and the cells that are also specified and claimed. First, the local files each relate the local variables corresponding to parameters for the cell to the global variables. Second, the cells correspond to the local files and have a set of parameters corresponding to the local variables of the local file. Third, the cleansheet file contains design rules for the plurality of cells such that the values for the global variables are defined therefrom. And finally an extract mechanism is provided to update values for the global variables from the global file from the design rules of the cleansheet file.

As described in Applicants’ patent specification, the claimed structure allows a user to follow a less error prone procedure of inputting global parameters to insure that universal values for a specific parameter in each of a plurality of cell instances are entered as well. When the global file is changed, the update mechanism, a computer program, may be run to update the set of parameters for each cell by reading values for the global variables to which the local variables of the corresponding local file correspond. Doing so allows the populating of these parameters into these cells to be performed more quickly, with less chance for errors that could otherwise occur in the manual entry of such parameters.

Although it is freely conceded that Ahmed is a computer based system employing some file and hardware component names similar to those used in applicant's claims, it can be seen on a more extended comparison that any such similarity is slight and that the two systems, in fact operate quite differently. As stated previously, Ahmed shows a generator for generating a series of realistic machine instructions typical of the real world and generated by elements of a specific computer network, to test a processor. Such a system is not at all similar to Applicants' claimed system and the Examiner's explanation suggesting that it is, is insufficiently detailed to meet the burden of demonstrating that each and every element of the claims is shown in the cited Ahmed patent. Reconsideration and allowance of the rejected claims 6, 8, 9, and 12 is respectfully requested.

Claims 7 and 13

As to claims 7 and 13

Claim 14

As to claim 14, the Examiner contends that Ahmed discloses a computerized system for implementing design verification. It was also contended that while Ahmed did not expressly disclose the specific computer language claimed, the language used in connection with the network claimed was "known in the art especially as used by Applicants". The Examiner apparently contends that as to this claim it would be obvious for a practitioner in the art to use such an available tool to implement a design verification process "as taught by Ahmed" to provide an efficient implementation. The Ahmed reference is conceded by the Examiner not to show the details added by claim 14 and it is submitted that the assertion that using the required language and network to carry out the calculation implementing claim 1 has not been shown by identifying any evidence of record. Reconsideration and allowance of claim 14 is respectfully requested.

Claims 15-21

As to claims 15 to 21, the Examiner claims that the claims directed to the computer system implementing the process claimed in claims 1-14, using the process as taught by the cited Ahmed patent. Applicants respectfully traverse the rejection. Claims 1-14 are for a computerized system and not for a process as the Examiner suggests. Additionally the computer of claims 15 through 21 is distinguished from what may be shown in the cited Ahmed patent for

AMENDMENT AND RESPONSE

Serial Number: 09/031,326

Filing Date: February 26, 1998

Title: PARAMETER POPULATION OF CELLS OF A HIERARCHICAL SEMICONDUCTOR STRUCTURE VIA FILE RELATION**Page 6**

Dkt: 303.376US1

the same reasons that each and every one of claims 1 through 14 is. Reconsideration and allowance of claims 15 through 21 is respectfully requested.

Claims 16-25

As to claims 16-25, the Examiner apparently claims that the claims are similar to claims 1 through 14 and apparently rejects them for the same specific reasons as claims 1 through 14. To the extent that the explanation of the rejection is understandable, it is submitted that the distinctions between those claims and anything that the Examiner contends is shown in the cited Ahmed patent is completely explained by Applicants' detailed responses to the rejections of claims 1 through 14. Reconsideration and allowance of claims 16 through 25 is respectfully requested.

Conclusion

Applicant respectfully submits that claims 1 through 25 are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney (612) 373-6970 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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Date

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By

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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to Assistant Commissioner of Patents, Washington, D.C. 20231 on February 10, 2000.

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FIG 1(a)

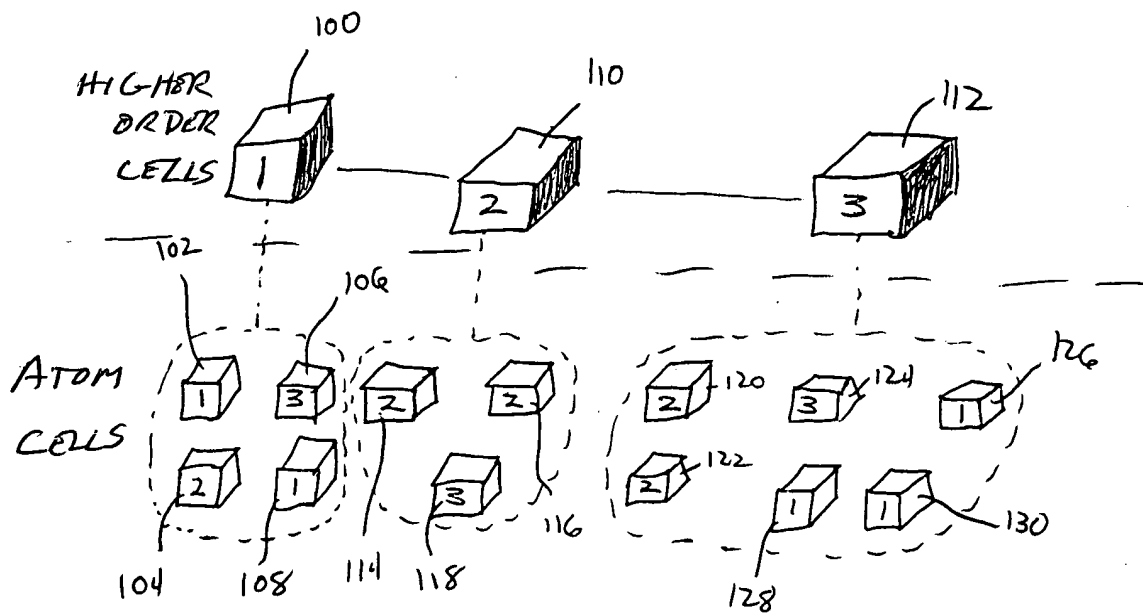


FIG 1(b)

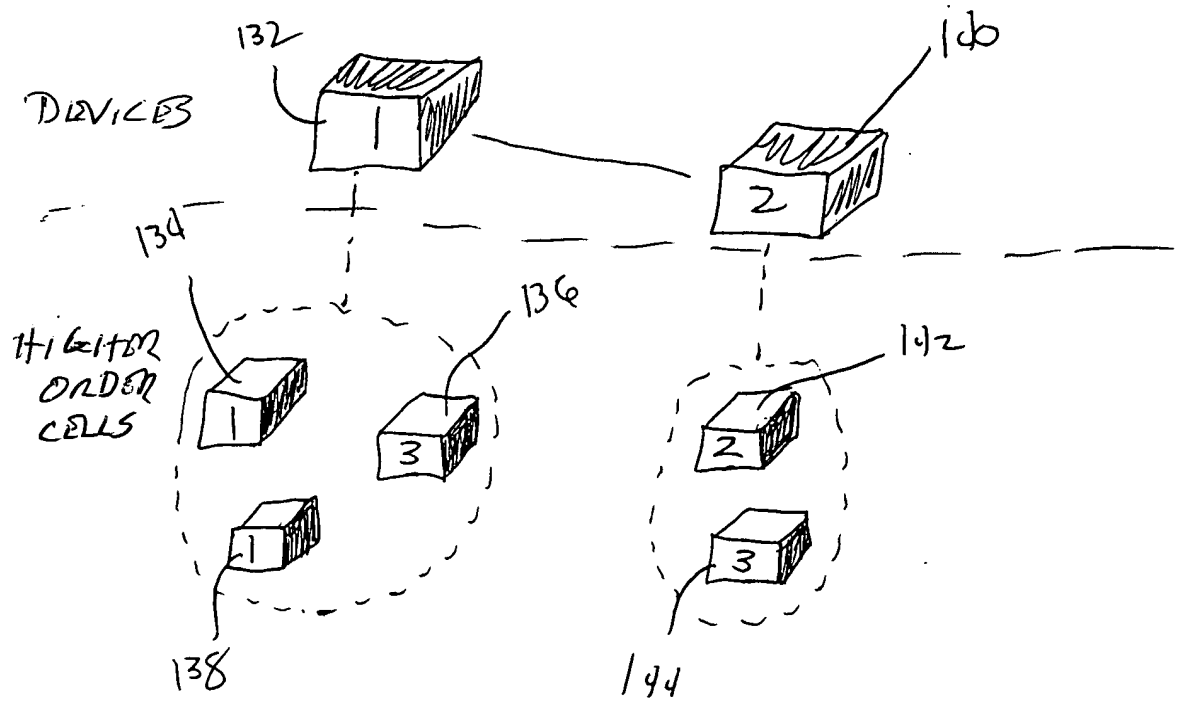


FIG 1(c)

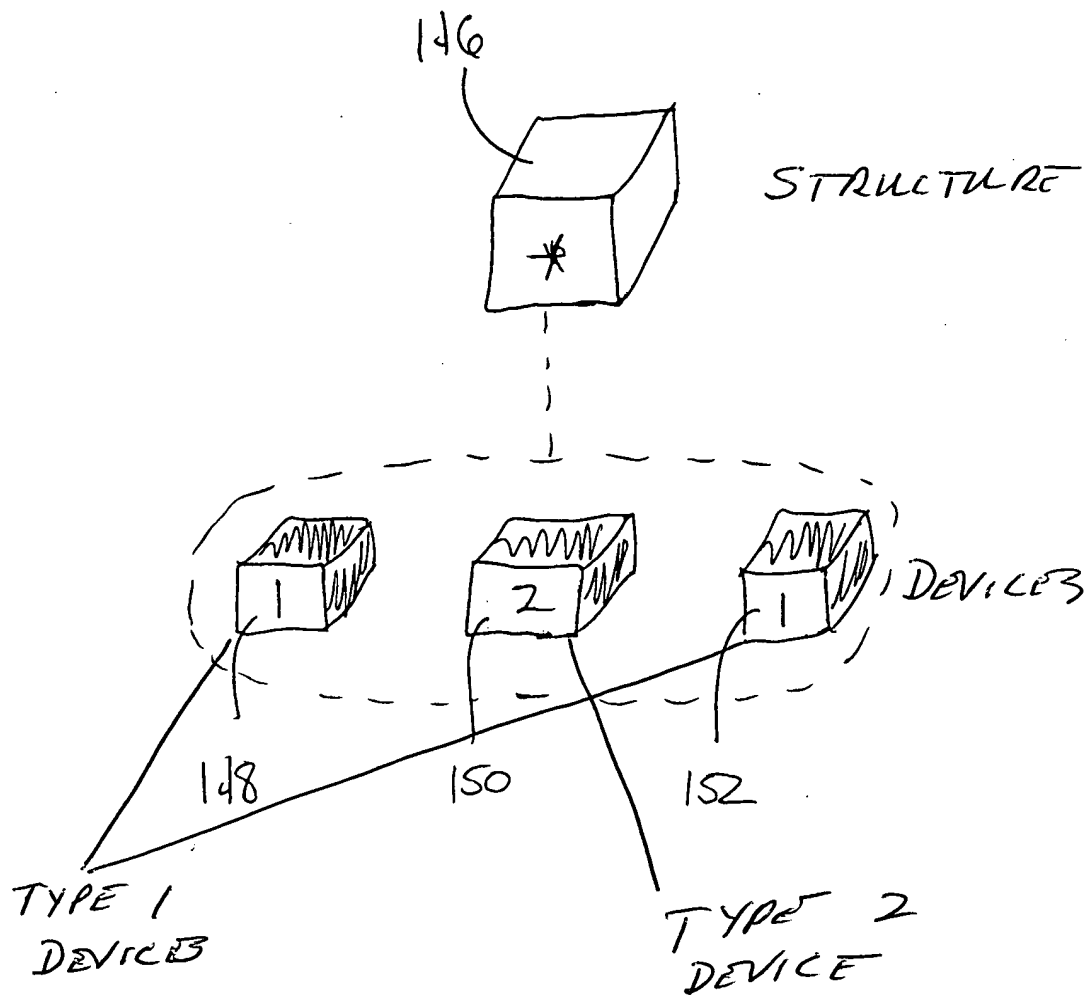


FIG 2

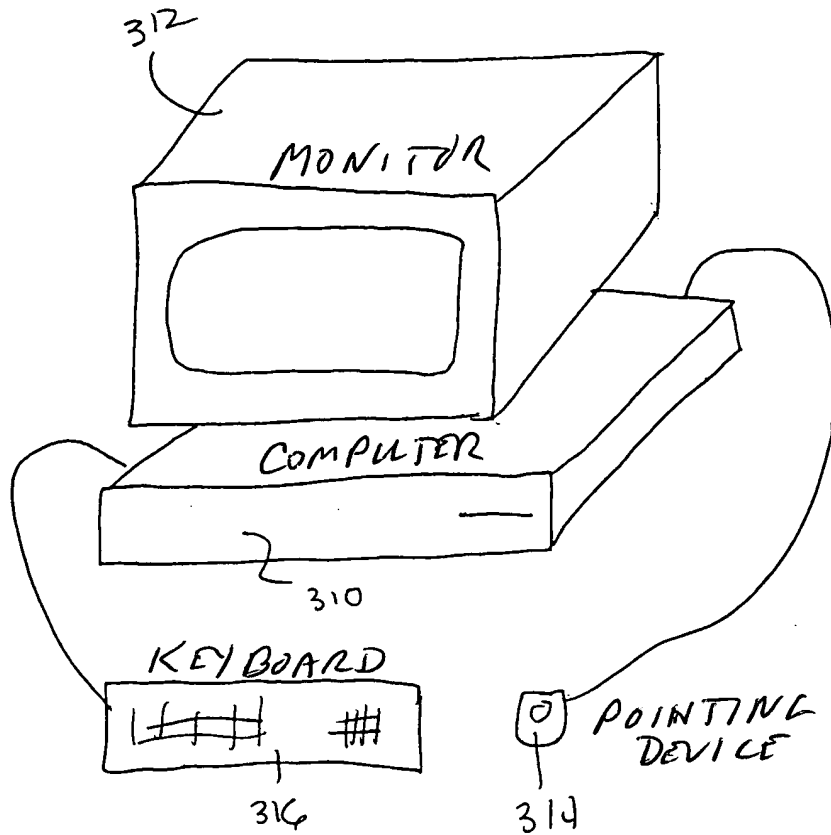
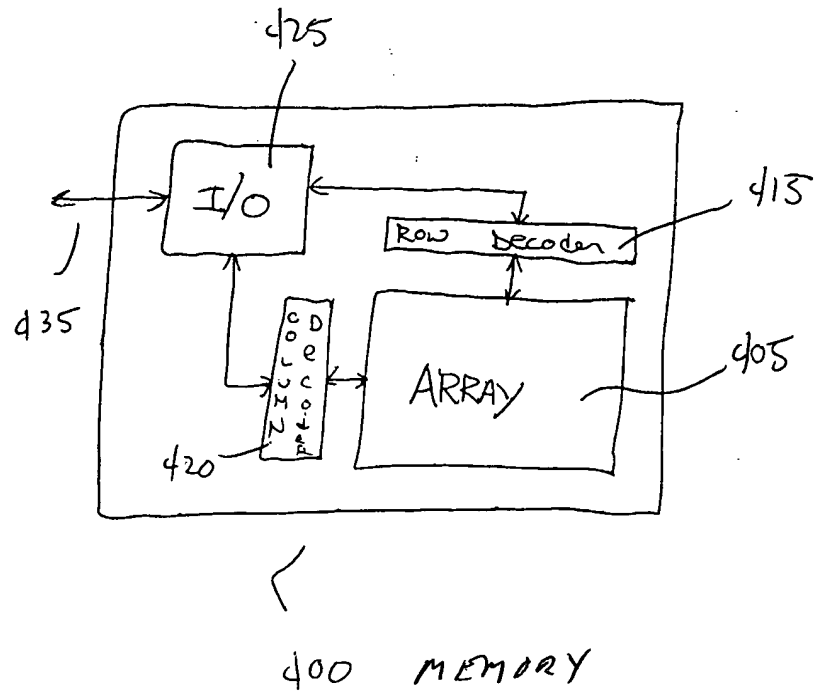


FIG 3



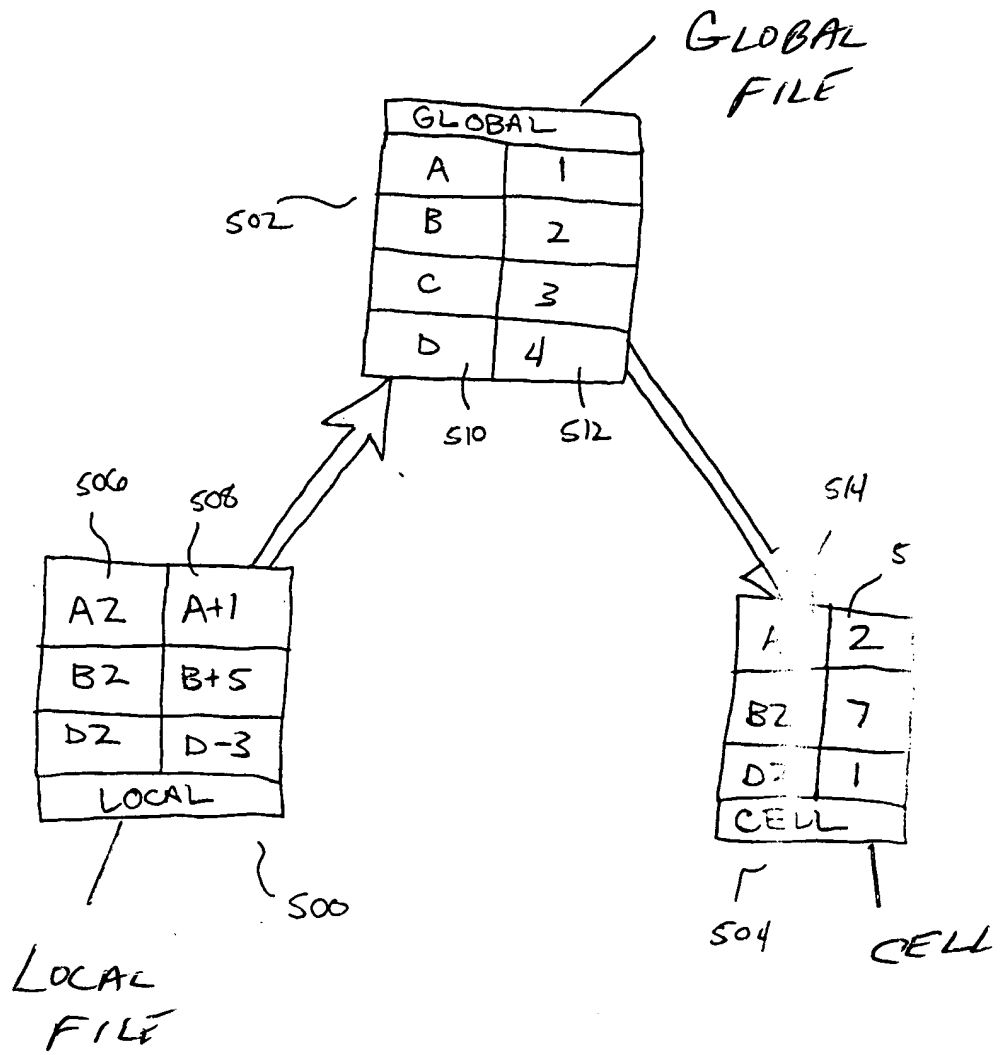


FIG 4